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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,839	11/08/2001	Theodore W. Houston	TI-23546	7628

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TEXAS INSTRUMENTS INCORPORATED  
P O BOX 655474, M/S 3999  
DALLAS, TX 75265

EXAMINER

SCHILLINGER, LAURA M

ART UNIT	PAPER NUMBER
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2813

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DATE MAILED: 09/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/007,839

Applicant(s)

HOUSTON ET AL.

Examiner

Laura M Schillinger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Blewer ('200).

In reference to claim 1, Blewer teaches a method comprising:

a) forming a structure (Fig.4 (5)) having porous semiconductor material at a first surface thereof (Fig.4 (4));

b) sealing the surface (Col.4, lines: 19-22- note that steam is heated H<sub>2</sub>O);

c) forming an epitaxial semiconductor layer on the porous material (Col.2, lines: 5-10),

c) implanting an oxidizing species into the porous semiconductor material after step b (Col.1, lines: 30-45),

d) reacting the oxidizing species with the porous semiconductor material to form a buried dielectric layer beneath the epitaxial layer (Col.2, lines: 10-20).

In reference to claim 2, Blewer teaches wherein the oxidizing species consists of O (col.2, lines: 10-20).

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In reference to claim 3, Blewer teaches wherein the semiconductor layer consists of Si (Col.2, lines: 10-15).

In reference to claim 4, Blewer teaches a method comprising:

- a) anodizing a Si wafer to form porous Si (Col.3, lines: 50-55 and Col.2, lines: 30-45);
- b) sealing the surface(Col.4, lines: 19-22- note that steam is heated H<sub>2</sub>O);;
- c) forming an epitaxial semiconductor layer on the porous material (Col.2, lines: 5-10),
- c) implanting an oxidizing species into the porous semiconductor material after step b (Col.1, lines: 30-45),
- d) reacting the oxidizing species with the porous semiconductor material to form a buried dielectric layer beneath the epitaxial layer (Col.2, lines: 10-20).

In reference to claim 5, Blewer teaches wherein the semiconductor layer consists of Si (Col.2, lines: 10-15).

In reference to claim 6, Blewer teaches a method comprising:

- a) partially anodizing a Si wafer to form porous Si (Col.3, lines: 30-40);
- b) sealing the surface(Col.4, lines: 19-22- note that steam is heated H<sub>2</sub>O);
- c) forming an epitaxial semiconductor layer on the porous material (Col.2, lines: 5-10),
- c) implanting an oxidizing species into the porous semiconductor material after step b(Col.1, lines: 30-45),

d) reacting the oxidizing species with the porous semiconductor material to form a buried dielectric layer beneath the epitaxial layer (Col.2, lines: 10-20).

In reference to claim 7, Blewer teaches wherein the oxidizing species consists of O (Col.2, lines: 10-20).

In reference to claim 8, Blewer teaches wherein the semiconductor layer consists of Si (Col.2, lines: 10-15).

In reference to claim 9, Blewer teaches the device as a result of claim 1 (linking claim- automatically rejected with claim 1).

In reference to claim 10, Blewer teaches the device as a result of claim 4 (linking claim- automatically rejected with claim 4).

In reference to claim 11, Blewer teaches the device as a result of claim 6 (linking claim- automatically rejected with claim 6).

In reference to claim 12, wherein sealing includes heating the porous semiconductor in a H ambient (Col.4, lines: 19-22- note that steam is heated H<sub>2</sub>O);.

In reference to claim 13, wherein sealing includes heating the porous semiconductor in a H ambient(Col.4, lines: 19-22- note that steam is heated H<sub>2</sub>O);.

In reference to claim 14, wherein sealing includes heating the porous semiconductor in a H ambient(Col.4, lines: 19-22- note that steam is heated H<sub>2</sub>O);.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M Schillinger whose telephone number is (703) 308-6425. The examiner can normally be reached on M-F 7:00 -4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on (703) 306-2794. The fax phone numbers for the

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organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1500.

LMS

August 28, 2002

*C. Chaudhari*

Chandra Chaudhari  
Primary Examiner